

# **EECE 690/890**

## **Digital Radio Hardware Design**

### **Team 1 Assignment 5**

**Due: Tuesday 11/17/98**

#### **Introduction**

This is the fifth and final in a series of assignments designed to guide you through the tasks needed to complete the RF transceiver design. In this assignment, you will generate your final parts list for the transceiver.

The basic tasks for each team member are the same, so only one set of instructions is given below. You should turn in individual parts lists for each sections (transceiver, synth), but make sure that you do not double-order parts.

There will be one remaining assignment after this one - testing the constructed phone and documenting your results.

#### **Tasks**

- ♦ Generate a complete parts list showing the following items for each part:
  - Quantity
  - Manufacturer
  - Manufacturer's part number
  - Vendor (e.g. Digi Key)
  - Vendor part number
  - Price each
  - Price total

Your parts list should be in a table format with the items above in columns and one row for each item.

We already have several items including the necessary RF dielectric resonator filters and the RF ICs. Show these items on the list, but put an asterisk in the Quantity column to note that we do not need to order them.

We also have some of the discretes you will need such as resistors, small-value capacitors (up to 0.22uF), and some inductors (list attached). Show the R, L, and C values you need on your list, and the quantities, but do not spend time on the part numbers unless we need to order them. After you list quantity and value for these parts, check the parts we have in-stock and put an asterisk next to ones that we clearly have enough of. For resistors,

this is probably all values. For capacitors, we will probably have most of what you need. For inductors, we have about 10 each of values from 3.3 nH to 220 nH (remember that the other company may want to use some, so assume we only have 5 of each). Finally, fill in the order info for the remaining parts.

- ♦ Work with your instructor and Steve Booth in the Electronics Shop to see that all parts are on-order.

Deliverables:

- ♦ A copy of your final parts list.

## **Team 1 Future Assignments**

The following gives an overview of the tasks remaining after task 4.

### **RF Transceiver Design**

- ♦ Build phone, test, and document results.